UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/628,878 | 07/28/2003 | Zhi Heng | 9896-000007 | 3895 |

| | | |
|---|---|---|
| 27572          7590          08/03/2007 | | EXAMINER |
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| ART UNIT | PAPER NUMBER |
|---|---|
| 2144 | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

| | | Application No. | Applicant(s) |
|---|---|---|---|
| **Office Action Summary** | | 10/628,878 | HENG, ZHI |
| | | **Examiner** | **Art Unit** | |
| | | Umar Cheema | 2144 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on <u>24 July 2007</u>.

2a) ☐ This action is **FINAL.**     2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) <u>1-10</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-10</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>28 July 2003</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a) ☒ All  b) ☐ Some *  c) ☐ None of:

   1. ☒ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____.

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

## DETAILED ACTION

### *Response to Amendment*

1.      Applicant's request for reconsideration of the finality of the rejection of the last

Office action is persuasive and, therefore, the finality of that action is withdrawn.

However the examiner has found another prior art, which reads on the entire pending

claim limitations.

### *Claim Rejections - 35 USC § 103*

2.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

    1.      Determining the scope and contents of the prior art.
    2.      Ascertaining the differences between the prior art and the claims at issue.
    3.      Resolving the level of ordinary skill in the pertinent art.
    4.      Considering objective evidence present in the application indicating
            obviousness or nonobviousness.

3.    **Claims 1-10** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ciscon et al (Ciscon) (US PGPUB 2002/0004827) in further view of Srivastava (US

6,684,331).


Regarding **claim 1**, Ciscon discloses a multi-layer user management (title, abstract, par.

0003) method for multicasting proxy, comprising:

dividing a user management for multicasting groups into three layers (abstract, par.

0003): management at an interface layer for controlling multicasting characteristics

corresponding to interfaces (abstract, par. 0014), management at a data link layer (fig. 2

(224)) for controlling multicasting characteristics corresponding to data links and

management at user layer (abstract, fig 1), for controlling multicasting characteristics

corresponding to particular users, and at each layer, setting control blocks that are

respectively comprised of multicasting characteristic data corresponding to said each

layer (abstract, par. 0003, 0013,0014);  establishing a data relationship among the three

layers of control blocks (par. 0073, fig. 4); and managing a user's joining or leaving a

multicasting groups using the data relationship among the three layers of control blocks

(abstract, fig. 3-4).

Ciscon does not disclose management system including **multicasting proxy** in his

disclosure. However in the same field of endeavor, Srivastava discloses multicasting

proxy in his invention (see abstract, col. 5, lines 1-10; multicast proxy service node).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention to combine the teaching of Ciscon and Srivastava for multi-layer user

management system for multicasting server proxy. Motivation to do so would have

been the proxy server is designed to provide extensible firewall and network security

(see Srivastava: col. 2, lines 55-57).

Regarding **claim 2**, Cisco discloses the method of Claim 1, wherein said controlling

multicasting characteristics corresponding to interfaces includes (par. 0014): judging

whether to allow multicasting applications at an interface, judging whether to allow

multicasting applications at a user side or a network side, judging whether to allow tying

multicasting resources or multicasting groups, limiting the number of members of a

multicasting group or limiting the number of multicasting groups (par. 0026,0085, fig. 4).

(Note: Ciscon et al introduce the Network Controller which may use MPLS to a network

layer or any other OSI (seven layer model) layer for controlling, determining, and

managing data packets for multicasting (par. 0085)).

Regarding **claim 3**, Cisco discloses the method of Claim 1, wherein said controlling

multicasting characteristics corresponding to data links is operable to limit the number of

members of a multicasting group (par. 0039,0040).

Regarding **claim 4**, Cisco discloses the method of Claim 1, wherein said controlling

multicasting characteristics corresponding to data links is forwarding only one

multicasting packet for all members of the same multicasting group at the same data

link when forwarding data (par. 0036, par. 0038).

Regarding **claim 5**, Ciscon discloses the method of Claim 1, wherein the data

relationship is established through a linking-list structure or a relational database

structure (par. 0036).

Regarding **claim 6**, Ciscon discloses the method of Claim 1, wherein the data

relationship is established through a three-dimensional linking-list data structure which

links each control block with linking-lists or arrays; the three dimensions of the three-

dimensional linking-list data structure comprise data link including interface, multicasting

group and user IP (par. 0038, 0039, 0040).

Regarding **claim 7**, the combination of Ciscon and Srivastava disclose the method of

Claim 1, wherein said managing user's joining or leaving a multicasting group

(Srivastava: col. 7, lines 21-28), comprises:

finding a certain interface layer control block according to data structure of an interface

of net (IFNET) having received a multicasting packet (Ciscon: par. 0056); then judging

multicasting characteristics of the multicasting group which are defined in the found

interface layer control block to determine whether to continue the successive

processing; if so, performing the next steps, otherwise ending the processing (Ciscon:

par. 0072); finding a certain data link layer control block according to the data

relationship between data link layer control blocks and said interface layer control block

(Ciscon: par. 0037); then judging multicasting characteristics corresponding to data links

of the multicasting packet to determine whether to continue the successive processing; if so, performing the next step, otherwise ending the processing (Ciscon: par. 0072); and finding a certain user layer control block according to a multicasting group IP and user attributes; then adding, deleting or modifying corresponding user information in the user layer control block (Ciscon: par. 0039, par. 0085).

Regarding **claim 8**, Ciscon discloses the method of Claim 7, further comprising: if no proper data link control block is found when finding a certain data link control block, adding a new data link layer control block at the data link (par. 0037, 0085); and establishing the data relationship among interface layer control blocks, user layer control blocks and the new data link layer control block (par. 0085).

Regarding **claim 9**,Ciscon discloses the method of Claim 1, wherein managing the users of the multicasting groups is forwarding control, further comprising: making data link layer devices attend multicasting management with device cluster control technique (Ciscon: par. 0056, fig. 4).

Regarding **claim 10**, Ciscon discloses the method of Claim 1, further comprising: recording the flow of multicasting packets having been forwarded with a device forwarding program and charging the user who has received said multicasting packets (par. 0030, 0034).
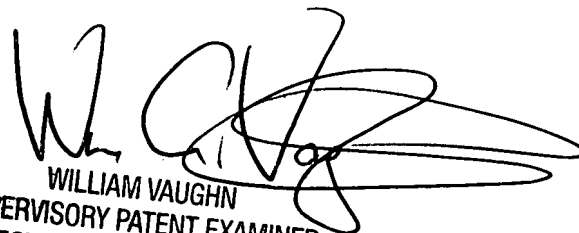
## *Conclusion*

4.      The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please refer to form PTO-892 (Notice of Reference Cited) for a list of relevant prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Umar Cheema whose telephone number is 571-270-3037. The examiner can normally be reached on M-F 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn, Jr. can be reached on 571-272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

uc

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